

### **Position of motif sequence 1**

### **Position of motif sequence 2**

StMuSP	158:GEEQIDLDVTKEYTMDFIRSTIENLARGCDLIRLDCAFAYAVKKLDTNDFVEPEIWTLLOKVRDIAAVSGAEILPEIHE 237
StPSP	158:GEEQIDLDVTKEYTMFIKRTIQHLASNGCDLIRLDCAFAYAVKKLDTNDFVEPDIWDLLOKVRDIAAEYGETLPEIHE 237
StSSP	158:GEEQIDLDVTKEYTMDFIKKNIENLAVNGCDLIRLDCAFAYAVKKLDTNDFVEPEIWDLLOKVRDIAAEAGADI LPEIHE 237
StMiSP	158:GEEQIDLDVTKEYTMFIKRTIQHLASNGCDLIRLDCAFAYAVKKLDTNDFVEPDIWDLLOKVRDIAAEYGETLPEIHE 237
LeuSP1	161:GEEQIDIDVNSIAKEFIKTTLEDVKGHANLIRLDCAFAYAVKKVDTNDFFVEPEIWDTLNEVREILTPLKAEILPEIHE 240
LeuSP2	161:GEEQIDIDVNSQIAKAFIKATLEDVKGHANLIRLDCAFAYAVKKVGTNDFFVEPEIWTVLNEVRIDLAPMHAELPEIHE 240
OenSP	158:GDEQIDINVKSKVHQEFFKDTLQSMVKHGADLIRLDCAFAYAIKKIDTNDFFEPEIWDLLESVRKLDPHLAEILPEIYE 237
LBSP1	158:GPDQMDLVTKTQDFIKHMLQNLSKHGASLIRLDCAFAYAIKKLDTNDFVEPEIWNLLEKVNDYLKDPTTILPEIHE 237
LBSP2	158:GEEQIDMDYRKEYTQKFIKDTLRLAIHGADLIRLDCAFAYAVKKLDTNDFVEPEIWDLKQVDDISOKGAMILPEIHE 237
ListSP	158:GEEQIDLDVTAEVKEYTQKFIKRTIKNMRAGCSILRLDAFAYAIKKLDTNDFVEPEIWDLDEVKAEEAKYDMELLPEIHE 237

**Fig. 1A**

## Position of motif sequence 3

D 249

StMuSP 238: HYT I QFKIADHDYYYDFALPMVTLYSLYSGKVDRALKWLKMSPMKQFTTLTDTHDG1 GVVVDVKD1 LTDEE I TYTSNELYK 317  
 StPSP 238: HYS I QFKIADHDYYYDFALPMVTLYTLYSRTERLAKWLKMSPMKQFTTLTDTHDG1 GVVVDVKD1 LTDEE I DYASNELYK 317  
 StSSP 238: HYS I QFKIAEHDYF1 YDFALPMVTLYSLYSGRYQRADWLAKSPMKQFTTLTDTHDG1 GVVVDVKD1 LTDEE I AYTSQLYK 317  
 StMiSP 238: HYS I QFKIADHDYYYDFALPMVTLYTLYSRTERLAKWLKMSPMKQFTTLTDTHDG1 GVVVDVKD1 LTDEE I DYASNELYK 317  
 LeuSP1 241: HYS I PPKINDHGYFTYDFALPMITLYTLYSGKTNQLAKWLKMSPMKQFTTLTDTHDG1 GVVVDARD1 LTDEE I DYASEQLYK 320  
 LeuSP2 241: HYT I PQKINAHGYFTYDFALPMITLYTLYSGKTNRLANWLQKSPMKQFTTLTDTHDG1 GVVVDARD1 LTDEE I DYASEEELYK 320  
 OenSP 238: HYT I PAKINEGYFTYDFALPMVLLSLSGNPKQLAKWLKMSPKKQFTTLTDTHDG1 GVVVDARD1 LTDEE I DYTSSELYK 317  
 LBSP1 238: HYTMPPFKREHGYF1 YDFALPMVLLSLSGNSTQLAAWLKKCPMKQFTTLTDTHDG1 GVVVDARD1 LTDDQ1 SYTTNELYK 317  
 LBSP2 238: HYSMPFKISKHGYYI YDFALPMVTLYSLYSGKSNRADWLKKCPMKQFTTLTDTHDG1 GVVVDARD1 LSPDEI KYTSNELYK 317  
 ListSP 238: HYS I QMKIANHDYYI YDFALPMVMLSLYSGRVERLAKWLEMSPMKQFTTLTDTHDG1 GVVVDARD1 LTDEELDYTSAELYK 317  
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StMuSP 318: VGANVNRKYSTAENNL1YQINSTYYSLGDDDKYFLARL1 QAFAPGIPQVYYVFLAGKNDLLEESTKEGRN1NRH 397  
 StPSP 318: VGANVNRKYSSAENNL1YQINSTYYSLGDDDKYFLARL1 QAFAPGIPQVYYVFLAGKNDLKLLEETKEGRN1NRH 397  
 StSSP 318: VGANVNRKYSTAENNL1YQINSTYYSLGDDDKYFLARL1 QAFAPGIPQVYYVFLAGKNDLKLLEKTKEGRN1NRH 397  
 StMiSP 318: VGANVNRKYSSAENNL1YQINSTYYSLGDDDKYFLARL1 QAFAPGIPQVYYVFLAGKNDLKLLEETKVGRN1NRH 397  
 LeuSP1 321: VGANVKKTYSSASYNL1YQINSTYYSLGNDDAYLLSRVFPQVAFPGIPQIYYVGLLAGENDI ALLESTKEGRN1NRH 400  
 LeuSP2 321: VGANVKKTYSSAAYNL1YQINSTYYSLGNDDAYLLSRVFPQVAFPGIPQIYYVGLLAGENDI DLLESSKEGRN1NRH 400  
 OenSP 318: VGANVKKTYSSAAYNL1YQINSTYYSLGNDDKAYLLARAI QIFAPGIPQIYYAGLLAGENDIDLLEKTKEGRN1NRH 397  
 LBSP1 318: VGANVKKYSSAEHNL1YQINTTYYSLGNDDKKYFIARLLQIFAPGIPQIYYVGLLAGENDI QLLEKTKEGRD1NRH 397  
 LBSP2 318: VGANVKKYSSAEHNL1YQINTTYYSLGNDDKKYFIARLI QMFAPGIPQVYYVGLAGKNDI ELLEKTKEGRN1NRH 397  
 ListSP 318: VGANVKKYSSSEKYNL1YQINSTYYSLGNDDKSYLARYI QCFAPGIPQIYYVGLLAGKNDI DLLEETKEGRN1NRH 397  
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StMuSP 398: YYSEEI AKEVKRPVVKALLNLFTYRNQSAFDLDGRIEVETPNEATI VIERQNKDGSHI ATAEI NLQDM-TYRVENDQ 476  
 StPSP 398: YYSEEI AKEVQRPVVKALLNLFSFRNRSEAFDLEGTEI ETPTAHSI VIKRQNQDKSVTAVVEI DLQNQ-TYRV EN-- 474  
 StSSP 398: YYSEEI AHEVERPVVKALI KLFSYRNNSQAFDLDGSLETEVLDHTI VIKRSNQDKSALQAVI NLQDL-TYQVTENGQ 476  
 StMiSP 398: YYSEEI AEEVQRPVVKALLNLFSFRNRSVAFDLEGIDVETPTAHSI VIKRQNQDKSVTAVAEI DLQNQ-TYRV---- 471  
 LeuSP1 401: YYTREEVKSEVKRPVVAANLLKLLSWRNESPAFDLAGSITVDTPTDTI VVTRQDENQNKAVLTADA-NKTFEIVENGQ 479  
 LeuSP2 401: YYTREEIKSAVKRPVVAIDLALLSWRNQFSAFALDGITVETPSEHDI KITRTDHSGDNIAILLANAK-TRTFVITANGK 479  
 OenSP 398: YYSEEVANEVQRPI VACLLKLLAVRNRSAAFDLQGDIQVSATDKNEIKIIRTSNGQDTAELTANVA-LKTFTIKENDK 476  
 LBSP1 398: YYDLDEI AEQVQRPVVKSLIKLEFRNSVPAFDLEGSIKVETPSEHEI VTRSHKAGTEVASTYVDFKNL-DYQVKYNDQ 476

Fig. 1B

StMuSP	477:T-ISFE-----	481
StPSP	475:----GVEV-----	478
StSSP	477:T-ITFE-----	481
StMiSP	472:-----MRTEXKY--ILKT	482
LeuSP1	480:TVMSSD-----NLTNQ--	490
LeuSP2	480:TVLQNK-----	485
OenSP	477:ILIIEDQTDT-KDI----	483
LBSP1	477:VFNF-----	480
LBSP2	477:VINF-----	480
ListSP	477:N-ILL-----	480

Fig. 1C

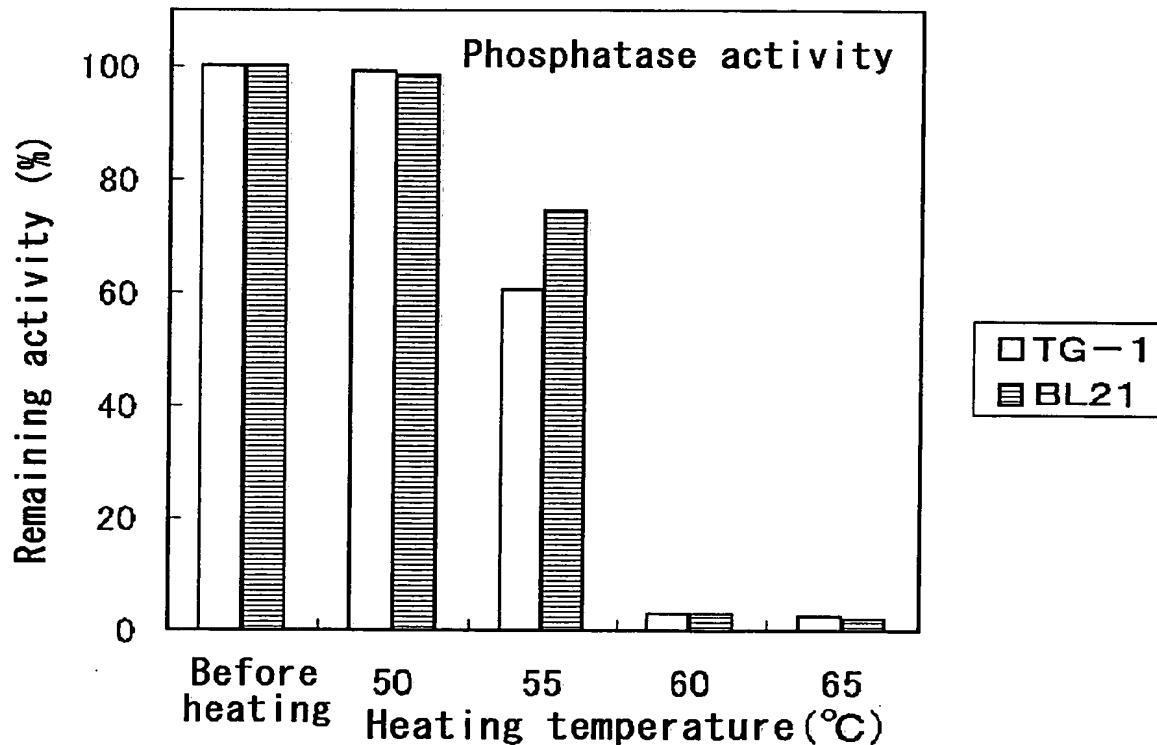


Fig. 2

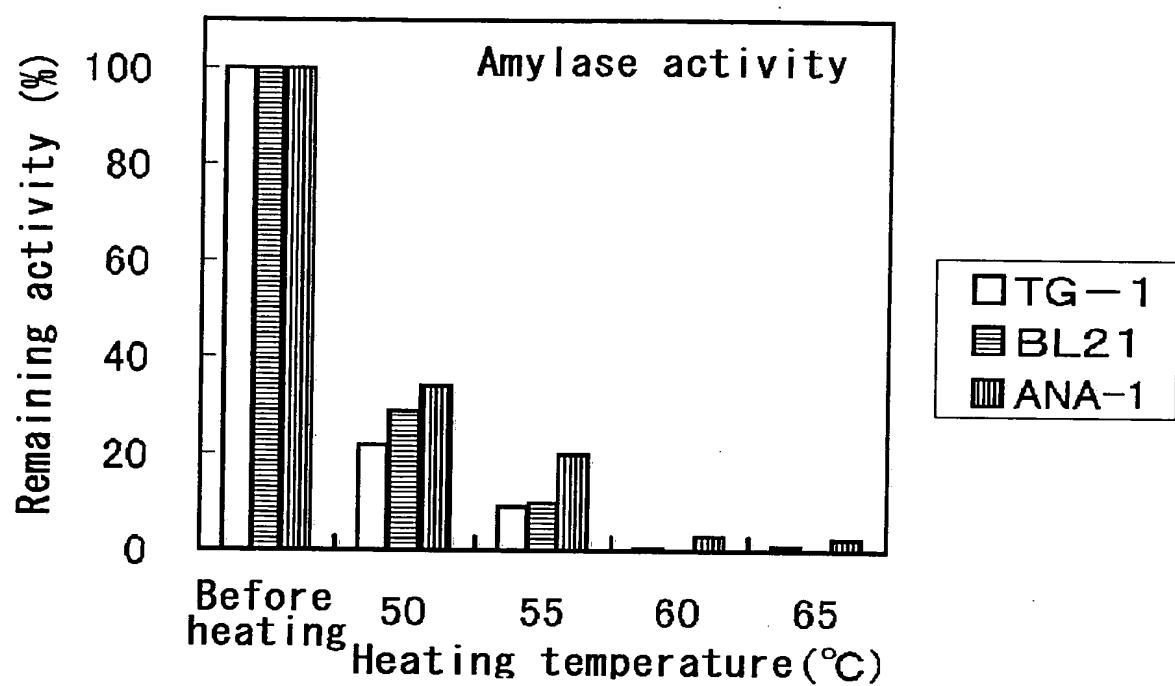


Fig. 3